POLICY RESEARCH WORKING PAPER 2593

Changing Trade Patterns after Conflict Resolution in the South Caucasus

Evgeny Polyakov

Peace in the South Caucasus will improve the region's economies in different ways. How much they will benefit depends on the strength of their supply response to demand in opening markets. The poor business environment and incomplete industrial restructuring act as constraints on export performance.

The World Bank
Europe and Central Asia Region
Poverty Reduction and Economic Management Sector Unit
April 2001

POLICY RESEARCH WORKING PAPER 2593

Summary findings

Since the breakup of the USSR, the South Caucasus region has experienced a range of political conflicts, resulting in a number of hot and cold wars and border closures. Polyakov analyzes the probably short-term impacts of peace in the region as a result of a resolution of the conflict between Armenia and Azerbaijan over the Nagorny Karabakh region and an end to the associated trade blockades, with an emphasis on Armenia, Azerbaijan, and Georgia.

The conflict has seriously distorted trade flows in the region, disrupted transport routes, and stifled export and import opportunities for Armenia and Azerbaijan. Georgia has enjoyed higher-than-normal transit through its territory. Trade has stopped in gas (from Azerbaijan to Armenia) and electricity (from Armenia to Turkey). Transport tariffs are unusually high, aggravated by government-imposed transit fees (taxes).

Over time, trade restrictions have eased and trading partners have found ways to conduct trade despite closed borders and blockades—but at a cost.

Applying a gravity model to regional trade, Polyakov concludes that South Caucasus countries trade enough with the CIS countries and politically friendly neighbors, but too little with the European Union, the United States, and hostile neighbors. Lifting the blockades would alleviate trade distortions and bring about short-term improvements, including:

- More rational trade flows.
- A resumption of (or an increase in) regional trade in major commodities such as energy.
- Lower prices or higher profit margins (or both) on some important consumption and production goods.

With peace, Armenia could more than double its exports if Azerbaijani and Turkish markets open, which could reduce Armenia's trade deficit by a third to a half and increase its GDP by 30 percent. Improving transport routes would produce immediate savings and relieve pressure on domestic prices, especially for energy.

Azerbaijan could increase its exports by $100 million, or 11 percent of 1999 levels, reducing its trade deficit by a quarter and raising its GDP by 5 percent. Its exports and imports would benefit from transport savings.

Transit through Georgia might decline, but probably not by more than a quarter of the freight service surplus.

This paper—a product of Poverty Reduction and Economic Management Sector Unit, Europe and Central Asia Region—is part of a larger effort in the region to explore growth prospects in the CIS economies. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Zakia Nekaien-Nowrouz, room H4-246, telephone 202-473-9057, fax 202-619-1197, email address znekaiennowrouz@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at evpolyakov @yahoo.com. April 2001. (42 pages)

Changing Trade Patterns after Conflict Resolution in South Caucasus

Evgeny Polyakov

The World Bank*

* The views in this paper are those of the author alone and should not be attributed to the World Bank.
We are grateful to Lev Freinkman, Bartek Kaminski, Beata Smarzynska, Christian Petersen, Jonathan Walters, Salman Zaheer, Ralf Schimmbeck, Artashes Kazakhetsyan, and Alexander Astvatsaryan for fruitful discussions and comments.

Table of Contents

1. Introduction 5

2. Current Trade Patterns 6
   2.1. Trade Volumes and Balances 6
   2.2. Main Trading Partners and Overall Effects of Blockades 9
   2.3. Main Commodity Flows 11
   2.4. Geography of Trade and Transport Costs 13
   2.5. Trade Regimes 17

3. Trade after Conflict Resolution 20
   3.1. Export Opportunities 20
   3.2. Price Levels 26
   3.3. Transport Savings 27

4. Trade in Energy 31
   4.1. Current Flows 31
   4.2. Flows after Conflict Resolution 32
      4.2.1. Electric Power 32
      4.2.2. Natural Gas 33
      4.2.3. Oil and Petroleum Products 33

5. Effects on the BOP 34

6. North-South Transit 35

7. Conclusions 35

References 40

Annexes

Transit fees 41
   Armenia 41
   Georgia 42

Tables

Table 1. Trade Volumes and Balances in South Caucasus, 1995-99 6
Table 2. Share of Selected Partners in Exports, 1994, 1998 7
Table 3. The overall freight factors in the South Caucasus countries, 1995-99 10
Table 4. Main commodity flows in the South Caucasus, 1999 12
Table 5. Transport costs, 1999 14
Table 6. Average annual (1995-98) and potential exports 21
Table 7. Average annual (1995-98) and potential exports under growth scenario 22
Table 8. Comparison of Selected Wholesale Prices in Armenia, Azerbaijan and Turkey, 1998 25
Table 9. Comparison of Selected Retail Food Prices in Armenia, Azerbaijan and Turkey, 1998 26
Table 10. Economy on transportation of Turkish exports to Azerbaijan, 1999 data 28
Table 11. Selected potential effects of trade normalization in South Caucasus 34

Abbreviations

AMD	Armenian dram
AR	Azerbaijan Republic
AZM	Azerbaijan manat
BOP	Balance of payments
CEE	Central and East Europe
CIS	Commonwealth of Independent States
EBRD	European Bank for Reconstruction and Development
EU	European Union
FSU	Former Soviet Union
GEL	Georgian lari
KWh	Kilowatt-hour
MW	Megawatt
PPP	Purchasing power parity
RA	Republic of Armenia
RG	Republic of Georgia
USD	United States dollar
VAT	Value added tax
WTO	World Trade Organization

1. Introduction

This study examines the likely short-term impacts of the resolution of Nagorny Karabakh and other regional conflicts, and the consequences of lifting the associated economic blockade on international trade in the South Caucasus region, with concentration on Armenia, Georgia, and Azerbaijan. The examination of short-term impacts includes the analysis of missing exports, opportunities for export creation, and transport savings. Although some longer-term prospects are explored, the paper does not attempt to quantify them. In addition, it does not investigate prospects for FDI increase in the region and associated benefits for growth and mutual trade. It also does not attempt to estimate economic losses associated with inadequate transport and trade infrastructure.[1]

Since the breakup of the USSR, the South Caucasus region has experienced a range of political conflicts resulting in a number of hot and cold wars and border closures. In this paper, we will examine the trade impacts of the following conflicts:

- A decade old dispute between Armenia and Azerbaijan over the *Nagorny Karabakh* region had led to a war between the two countries. In 1994, the armistice was reached but the borders between the two countries are closed and trade, officially, does not exist;

- Seriously strained relations between *Turkey* and *Armenia* dating back to the events of WWI, when large numbers of Armenian population perished triggering a mass exodus out of the country. Currently, the Turkish-Armenian border is closed; trade takes a circuitous route via Georgia and is well below its potential;

- *Abkhazia and South Ossetia conflict within Georgia.* These two Georgian provinces declared independence in the early 1990's and, after the wars, *de facto* retained it. The borders between the provinces and the Georgian mainland are closed;

- *Chechnia conflict within Russia.* The province declared independence in the early 1990's. After two wars, however, the central authorities have regained control over it in 1999. The borders have been opened but internal disorder in the province hampers trade.

The detailed account of the impact of the closed borders on the trade routes and transport costs is given in Sections 2.4 and 3.3.

The paper is organized as follows. Chapter 2 describes the current trade patterns, including trade volumes and BOP of each of the three South Caucasus countries, partner arrangements, commodity flows, the geography of trade, and trade regimes. Chapters 3 and 4 seek to assess the different aspects of economic losses in trade arising from the conflicts. They also try to evaluate trading outcomes if full political reconciliation is achieved in the region, including export creation, transport savings, impacts on price

[1] These issues have been addressed in the World Bank report *Trade Facilitation* (2000).

levels, and regional competition. Chapter 3 deals with non-energy trade and applies a gravity model to evaluate missing exports and to put into perspective current trade patterns. Chapter 4 is dedicated to trade in energy. Chapter 5 summarizes the previous results in the framework of the BOP. Chapter 6 takes up an issue of possibly adding the South-North flows to the currently dominant East-West flows. Chapter 7 provides conclusions.

2. Current Trade Patterns

2.1. Trade Volumes and Balances

All three Caucasus countries run high trade deficits (see Table 1 below). The deficit-to-exports ratios have been very high in Armenia and Georgia during the whole period – from 162 to 252 percent in Armenia and from 162 to 232 percent in Georgia. The Azerbaijani deficit has been lower – between 40 and 154 percent of exports. In 1999, breaking the adverse trend, the trade deficits of all three countries shrank.

Over the past four years, Armenian and Georgian exports were stagnant, while Azerbaijani exports increased by 60 percent, thanks to large foreign investments in the oil sector.

Table 1. Trade Volumes and Balances in South Caucasus, 1995-99

(US Dollars Million)

	1996	*1997*	*1998*	*1999*
Armenia:				
Exports	290,3	232,5	220,5	231,7
Imports	855,8	892,3	902,4	811.3
Trade Balance	-565,5	-659,8	-681,9	-579.6
As % of exports	-162	-240	-252	-227
Azerbaijan:				
Exports	643.7	808.3	677.8	1,025.2
Imports	1,337.6	1,375.2	1,723.9	1,433.4
Trade Balance	-693.9	-566.9	-1,046.2	-408.2
As % of exports	-108	-70	-154	-40
Georgia:				
Exports	310.0	376.5	300.0	329.6
Imports	897.5	1,162.8	994.5	863.4
Trade Balance	-587.5	-786.3	-694.6	-533.9
As % of exports	-190	-209	-232	-162

Sources: National Statistical Agencies of Armenia, Azerbaijan, and Georgia.

Table 2. Share of Selected Partners in Exports, 1994,1998
(Percent)

	Armenia	*Azerbaijan*	*Georgia*
1994			
Armenia	X	--	8.5
Azerbaijan	--	X	9.7
Georgia	1.3	2.5	X
Russia	38.9	21.4	34.0
Other CIS	33.1	18.2	24.2
Turkey	0.1	2.5	14.9
Iran	6.8	39.4	3.2
UAE	0.1	0.1	0.0
EU	16.4	12.8	0.9
USA and Canada	0.2	0.0	1.3
Rest of world	3.4	3.1	4.5
1998			
Armenia	X	--	0.6
Azerbaijan	--	X	9.6
Georgia	4.3	12.7	X
Russia	18.1	17.5	28.7
Other CIS	14.1	8.1	16.8
Turkey	1.4	22.4	10.5
Iran	14.2	14.2	1.3
UAE	1.7	0.5	0.2
EU	34.6	21.7	19.1
USA and Canada	5.4	1.4	5.9
Rest of world	11.6	2.9	13.1
Change between 1994 and 1998			
Armenia	X	--	-7.9
Azerbaijan	--	X	-0.1
Georgia	3.0	10.2	X
Russia	-20.8	-3.9	-5.3
Other CIS	-18.9	-10.1	-7.4
Turkey	1.3	19.9	-4.4
Iran	7.4	-25.2	-1.9
UAE	1.6	0.4	0.2
EU	18.2	8.9	18.2
USA and Canada	5.2	1.4	4.6
Rest of world	3.1	-1.6	4.0

Source: Statistical Yearbook of South Caucasus, 2000.

Table 2: Share of Selected Partners in Imports, 1994, 1998 (Contd.)

(Percent)

	Armenia	*Azerbaijan*	*Georgia*
1994			
Armenia	X	--	0.3
Azerbaijan	--	X	7.0
Georgia	4.5	1.0	X
Russia	28.5	15.1	7.9
Other CIS	19.2	46.4 *	65.5 *
Turkey	0.1	9.8	11.4
Iran	10.8	8.6	0.2
UAE	0.3	1.2	0.0
EU	9.4	9.0	3.6
USA and Canada	24.5	0.0	1.5
Rest of world	2.7	8.9	2.6
1998			
Armenia	X	--	1.1
Azerbaijan	--	X	8.3
Georgia	3.0	2.3	X
Russia	21.2	18.0	14.8
Other CIS	1.3	17.3	6.0
Turkey	6.3	20.4	11.1
Iran	7.1	4.0	0.6
UAE	6.0	4.2	2.2
EU	27.8	20.8	31.0
USA and Canada	11.3	4.0	8.7
Rest of world	27.3	13.0	24.9
Change between 1994 and 1998			
Armenia	X	--	0.8
Azerbaijan	--	X	1.3
Georgia	-1.5	1.3	X
Russia	-7.3	2.9	6.9
Other CIS	-17.9	-29.1	-59.5
Turkey	6.2	10.6	-0.3
Iran	-3.7	-4.6	0.4
UAE	5.7	3.0	2.2
EU	18.4	11.8	27.3
USA and Canada	-13.2	4.0	7.2
Rest of world	13.3	0.1	13.6

Source: Statistical Yearbook of South Caucasus, 2000.

* The largest partner was Turkmenistan (energy).

2.2. Main Trading Partners and Overall Effects of Blockades

The main trading partners of the South Caucasus countries are Russia, other CIS countries, Turkey, Iran, the UAE, the EU, the USA and Canada. Their shares in trade flows between 1994 (the year of the ceasefire between Armenia and Azerbaijan) and 1998 are presented in Table 2.

The shares changed as follows:

Exports

Armenia has been withdrawing gradually from the Russian and other CIS markets, while increasing its trade presence in the EU and Iran. The share of exports to the EU has grown thanks to the diamond processing industry (with a high import content). This operation, however, generates only 15 percent value added. Iran buys from Armenia scrap metal, copper concentrate and electric power (on a swap basis). Armenia's exports to its other neighbors are relatively small.

Despite a loss of market share, Russia and the CIS remained a major exports market for Armenian goods absorbing brandy, synthetic rubber, and engineering products.

Azerbaijan has drastically reduced the share of its exports to Iran and other CIS countries (excluding Russia and the Caucasus) while increasing the share of Turkey and Georgia. The only exception is energy products, which remained an important export to the CIS countries.

Georgia has increased its EU share at the expense of all other partners. Still, Russia, other CIS countries, Turkey, and Azerbaijan remain its important partners.

All three countries have increased their share of exports to North America. However, this represents a modest figure in overall exports.

No trade has been officially recorded between Armenia and Azerbaijan.

Imports

Armenia has increased the shares of imports from the EU and Turkey, and it has reduced the shares from Russia and the CIS. The main import countries in 1998 were Russia, the EU, Iran, and, somewhat unexpectedly, Turkey. The latter does not have official trade relations with Armenia, and its exports go through intermediate addresses in Georgia. The share of import from North America has declined dramatically from 24.5 percent to 11.3 percent. At the same time, the value of North American imports has not changed much. It stood at 96.1 million dollars in 1994 and at 96.3 million dollars in 1998. The effect can be attributed to the rising overall value of imports and the relative decline of humanitarian aid in imports.

Azerbaijan has reduced the share of its imports from other CIS countries, and it has increased the shares from the EU and Turkey.

Georgia has reduced the imports from other CIS countries in favor of the EU and the rest of the world, including North America, which provides a large amount of humanitarian aid.

In the last half decade, in spite of economic blockades and closed borders, trade flows have tended towards gradual normalization. The only exception is the lack of official trade relations between Armenia and Azerbaijan. Even in this case, anecdotal evidence indicates that some unofficial trade between these two countries is taking root. Economic blockades and closed borders are far less rigid than one would have imagined in the early 1990s.

The general effect of blockades can be illustrated by the dynamics of the overall freight factor (the ratio of freight costs to the value of merchandise) in the BOPs of the South Caucasus countries.

As shown in Table 3, Armenia registers the highest freight factor; it is lower in Azerbaijan, and even lower in Georgia. This is not surprising, as Armenia is the most geographically isolated country; it also suffers the most from the regional blockades. The factor shows high year-to-year fluctuation due to the changes in the commodity composition of trade. For instance, a rapid growth of the diamond exports from Armenia (with high value-to-weight ratio) was a major factor behind the decrease in the freight factor.

The slope of the linear time trend ($y = a + bt$) presented in the last column shows that Armenia, which suffered the most from the blockade, has had the most pronounced, and statistically significant, tendency towards the decrease of the freight factor over time. The blockades have eased a bit, and the flow of goods has found ways around existing obstacles.

Trend coefficients for Azerbaijan and Georgia countries have large standard errors making the results ambiguous. (The Azerbaijani freight factor has also declined, while Georgian has increased.)

Table 3. The overall freight factors in the South Caucasus countries, 1995-99

(Percent)

	1995	*1996*	*1997*	*1998*	*1999*	*Change between first and last year*	*Slope of linear time trend ($y = a + bt$)*	*Standard error for slope*
Armenia	12.0	11.3	12.3	10.1	9.3	-2.7	-0.67	0.26
Azerbaijan	10.5	8.6	9.4	13.5	7.4	-3.1	-0.14	0.83
Georgia	N/A	7.9	3.9	8.2	8.3	0.3	0.53	1.10

Source: The author's calculations based on the national BOPs.
Note: The overall freight factor is the ratio of freight costs (defined as the sum of freight debit and credit) to merchandize value (the sum of merchandize debit and credit) in the balance of payments.

The freight factors in the South Caucasus are high though not impossibly high by international standards. For instance, the following countries had similar or higher freight factors in 1995 (in percent): Bahrain – 14.5, Kuwait – 13.8, Bulgaria – 9.7, Poland – 9.3, Ukraine – 8.4[2]. The freight factor in each Caucasus country is, however, much higher than in the EU, where it stands at 1.5 percent. The restrictions placed on the movement of goods explain in part the generally high freight factor in the FSU; other significant factors include high cost of transporting goods due to inefficient transportation systems and long distances between trading hubs.

The gradual easement of the blockades over the last five to seven years can be attributed to:

- Increased political stability in Georgia, which has allowed it to become a major transit route for Armenian exports and imports;
- Increased cooperation with Iran, which has increased its role as a transit country;
- Optimization of trade flows and routes due to the improved efficiency of regional trade, gained trading experience, and the increased knowledge of markets and trading partners.

The early assumptions of a prolonged and severe economic blockade made a few years ago had led to some costly, uneconomic decisions. One such example is the construction of a large freight terminal at Zvartnots airport (Yerevan), which was financed by an EBRD loan in the amount of US$22.8 million. The demand for air cargo transportation, which was based on the assumption about a strict international blockade of Armenia, has turned out to be significantly lower than the initial estimate. As such, the terminal currently operates at below 20 percent capacity.

Nevertheless, closed borders and blockades still inflict economic losses and lead to a suboptimal geography of trade in the region.

2.3. Main Commodity Flows

The main commodity flows among Armenia, Azerbaijan, and Georgia and their main trading partners, Turkey, Russia, and Iran, are presented in Table 4.

[2] Source: *A Review of Statistics on Trade Flows in Services* (1997). Note that oil exporters in the sample have very high freight factors due to the high costs of the transport of oil to distant markets.

Table 4. Main commodity flows in the South Caucasus, 1999

(The coverage of the relevant trade flow, in percent, is presented in parenthesis)

Exporting countries	*Importing countries*					
	Armenia	Azerbaijan	Georgia	Iran	Russia	Turkey
Armenia	X	--	Electricity, cement, liqueur (71 %)	Electricity, scrap metals, copper concentrate (66 %)	Liqueur, synthetic rubber, ferro-molybde-num alloy (44 %)	Raw animal hides and skins (72 %)
Azerbaijan	--	X	Crude oil and oil products (86 %)	Diesel, aluminum scrap (74 %)	Electricity, tobacco, crude oil (60 %)	Diesel, plastics, crude oil (69 %)
Georgia	Oil pro-ducts, wheat, gas, sawn-wood (33 %)	Electricity, ferrous metals and articles, cement (63 %)	X	Lathes, machinery and machine-tools, steel products (58 %)	Wines, ferro-alloys, tea (67 %)	Scrap metals, wood (rough and sawn), sunflow er seed (64 %)
Iran	Electri-city, process-ed food, oil products (42 %)	Electricity, processed food (56 %)	Constructio n machines, furniture, oil products, asphalt, passenger cars (51 %)	X	N/A	N/A
Russia	Natural gas, nuclear fuel (55 percent)	Wheat, flour, cement, wood (sawn or chipped) (48 %)	Natural gas, pharmace-uticals (58 %)	N/A	X	N/A

Table 4. Main commodity flows in the South Caucasus, 1999 (Contd.)

(The coverage of the relevant trade flow, in percent, is presented in parenthesis)

Exporting countries	*Importing countries*					
	Armenia	Azerbaijan	Georgia	Iran	Russia	Turkey
Turkey	Cigarettes, oil products, processed food, wheat, chemicals (30 %)	Machinery and mechanisms, processed food (53 %)	Processed food, chemicals, apparel (49 %)	N/A	N/A	N/A

Sources: National Statistical Agencies of Armenia, Azerbaijan, Georgia, and Russia.
N/A: Not applicable for the purposes of this report.

The table shows that the South Caucasus countries export primarily energy, mineral resources, and semi-finished products. Armenia exports copper and molybdenum concentrate. Azerbaijan exports oil and gas. The scrap of ferrous and non-ferrous metals, released in the process of the physical dismantling of the Soviet industrial infrastructure, is among the most important exports. Some ex-Soviet industries continue to operate in the region, including Armenia's chemical industry, Georgia's metallurgy, and Azerbaijan's oil refinery; the outputs of these industries enter regional trade. Agricultural and forest products (such as animal skins in Armenia, wood and sunflower seed in Georgia) are also traded. In the last decade, the exports of agricultural products have decreased, and the exports of industrial products (especially, light industry and machinery) have collapsed, along with the collapse of regional industry. Despite transport disadvantages, products with low value-to-weight ratio continue to dominate the exports of the South Caucasus countries.

The South Caucasus countries import energy, cereals (a lot of which are offered as humanitarian aid), processed food, consumer goods, and machinery.

2.4. Geography of Trade and Transport Costs

This section describes the prevailing trade routes between the three South Caucasus countries and their main trading partners. It also looks at associated transport and handling costs. Energy trade is relegated to the dedicated chapter. Table 5 presents various transport costs within and outside the region.

Table 5. Transport costs, 1999
(USD)

From:	*To:*					
	Armenia	Azerbaijan	Georgia	Iran	Russia	Turkey
Armenia	X	--	300 – 20' rail, 500 – 20' f.o.b. vessel	500 –700 20t truck (Tehran) 1,200 –20' (Bandar-Abbas)	3,100-3,500 -- 20' road, 2,800 -- 20' rail (to Moscow)	--
Georgia	17/t – general cargo, 30-32/t – wheat, flour, sugar, rail, 300-350 per 20t truck, 1,400 – 20', 1,800 – 40' rail, incl. terminal charges, 1,400 – 20', 1,800 - 40' road (from Poti)	$ 500 – 700 – 20', 12-13/t (general cargo, rail, from Poti),	550 – 20', 700 –40' (r/t, Poti – Tbilisi)		3,000 -- 20 t truck (Sverd-lovsk)	15-20/t (general cargo incl. port charges)
Iran	500 – 700 20t truck (Tehran) 1,200 – 20', 1,400 – 40' (Bandar-Abbas)			X	N/A	N/A

Table 5. Transport costs, 1999 (Contd.)
(USD)

From:	*To:*					
	Armenia	Azerbaijan	Georgia	Iran	Russia	Turkey
Russia	2,000 for 20' (from Novoro-ssiisk)			N/A	X	N/A
Turkey	2,300 for 20t truck (from Istanbul),	3,500 - 13 t trailer, 3,000 - 20', 3,500 – 40' (road via Iran);2,600 – 20',2,900 – 40' (sea-road via Poti)	15-20/t (general cargo incl. port charges), 2,700 – 20', 3,300 – 40' (Izmir-Tbilisi, road)	N/A	N/A	X

Sources: Author's interviews with transportation and trade companies in the region.
N/A -- Not applicable for the purposes of this report; 20' and 40' – 20 and 40 foot container.
Note: Transport costs between some other important destinations are listed below: Dubai – Baku: $ 1,800-2,100 for 20' and $ 2,900–3,000 for 40' container; West Europe-Baku: $ 3,000 for 40' container, or $ 3–5/kg (road), $ 2,000-$2,50 for a 60t wagon (railway); Poti – Europe: $ 1,500 for 20', $ 2,000 for 40'; Europe -- Poti: $ 1,200 for 20', $ 1,500 for 40'; Poti – USA (Northeast): $ 2,200-2,400 for 20', $ 3,000–3,400 for 40'; Yerevan – Europe: $3,000–3,500 for 20', 4,000 for 20t truck; Europe – Yerevan: $ 6,000 – 7,000 for 20t track; Yerevan – Los Angeles: $ 3,600 for 20', $ 4,900 for 40'; Ilyichevsk (Ukraine) – Yerevan: $ 3,400 for a 60t wagon.

Trade between Armenia and Georgia utilizes railroads and roads on the common border. There are no trade barriers arising from conflicts. On the contrary, the Nagorny Karabakh resulted in the emergence of Georgia as the only conduit for Armenian trade with much of the world, including Turkey, Russia, Europe, and overseas. Georgia is likely to see its transit significance weaken if the regional borders open.

Trade between Armenia and Iran flows via road through Megri (an Armenian town on the Iranian border). A shorter route through the Nakhichevan region in Azerbaijan is closed, resulting in extra transport costs.

Since the border between Armenia and Turkey is officially closed, trade goods between the two countries are sent via Georgia. That is, Turkish goods delivered to Armenia are rerouted through a Georgian intermediary. In Georgia, the stated destination is switched to Armenia. The same scheme works in the opposite direction. This procedure does not allow trade in construction materials (due to high transport costs) and energy.

Poti serves as the main regional seaport and is linked by a railway with all three countries. The most economic mode for general cargo to Armenia would be maritime to Poti followed by railway. Containers are transported primarily by road rather than by railway due to time efficiency and better reliability.

Trade goods between Armenia and Russia travel by railway via Azerbaijan and by road via Georgia. Gas and power lines link the two countries through Georgia.

When using the railway through Azerbaijan, the consignments are assigned to a Georgian intermediary, a scheme that is used in the trade between Armenia and Turkey.

There is no recorded trade between Armenia and Azerbaijan. There is some anecdotal evidence on informal trade between the two countries, either via Georgian intermediate addresses or across the border, mainly in energy, agricultural, and consumption products. However, the volume of this trade remains small.

Trade between Azerbaijan and Georgia goes directly by railways and roads. There are gas and oil pipelines between the two countries. The routes are not affected by regional conflicts.

Trade between Azerbaijan and Iran is conducted across their common border and does not suffer from the conflicts.

Trade between Azerbaijan and Turkey must traverse either Georgia or Iran. There is a shorter road via Armenia, the use of which would bring transport costs down. General cargo delivered by ship still have to go through Poti.

Azerbaijan and Russia trade across their common border. The problems of trading that arose with the Chechen conflict in Russia were resolved in 1999 with the completion of rail and pipeline links bypassing Chechnia.

Georgia and Turkey share a common border on the Black Sea. Trade routes are not negatively affected by area conflicts.

Trade between Georgia and Russia flows directly by sea and by road or by railroad via Azerbaijan; energy flows by direct pipelines and energy lines. The closed railway on the east coat of the Black Sea (due to the Abkhazia conflict) has a minor effect

on cargo flows, since that railway was designed and used for primarily passenger transportation.

Railway tariffs. After the breakup of the Soviet Union, the CIS countries switched from the Soviet tariff system to international tariffs, based on the NTT tariff system[3]. At the same time, in order to slash the cost of long-haul transit, a number of CIS countries concluded separate agreements to lower the NTT tariffs. Georgia, Azerbaijan, Turkmenistan, and Uzbekistan entered into the Xerox and Baku agreements, which allow a 50 percent tariff reduction for all goods travelling between those four countries. Georgia and Armenia bilaterally agreed to a 25 percent tariff reduction for shipments within the two countries. As a result, tariffs for Armenia on the Georgian railway are 25 percent higher than those for the Xerox/Baku agreement participants. If Armenia joins, the tariffs for its transit will be reduced accordingly.

There are two major problems with the railway tariff schedules. First, the effective tariffs are often set with little regard to international agreements, since private and public transport providers in all Caucasus countries and Russia are not properly regulated and are ridden with corruption. Second, Armenia is not a member of the Xerox and Baku agreements, which hampers its railway transport even if its shipments were officially allowed to traverse the Azerbaijani territory.

Transit fees. Armenia and Georgia levy high transit fees on foreign vehicles. There is no transit fee in Azerbaijan, Iran, and Turkey. However, all countries apply transit quotas (the number of vehicles per year allowed to pass through the country's territory, by nation).

Fee schedules are presented in the Annex. According to the schedules, the most common carrier -- a truck with the capacity of 10-20 tons – transiting the Georgian territory must pay $245 equivalent in local currency (at the October, 2000, exchange rate). A similar vehicle transiting the Armenian territory must pay $197 equivalent, also in local currency (total fee = $27.93 ecological charges + $20.00 cargo transit fee + $148.98 vehicle transit fee). For the Georgia-bound cargo, the fee is raised by $80.

According to Table 5, transportation companies offer the following tariffs from Georgia to Armenia: $300-350 for a 20 ton truck, $1,400 for a 20 foot container, and $1,800 for a 40 foot container. Thus, the transit fee equals 70-82 percent of the tariff for trucking, 18 percent for a 20 foot container, and 14 percent for a 40 foot container.

2.5. Trade Regimes

There are three major trading blocks in the region:

- the "free trade" agreements among the CIS countries;

[3] The NTT international tariff agreements, in addition to the CIS, include the Baltic and CEE countries. Formally, the South Caucasus countries did not sign the agreement. However, the NTT systems is *de facto* used for transit in Azerbaijan and Georgia. Armenia is not included for political reasons.

- the Customs Union of Armenia, Russia, Belarus, Kazakhstan, Kyrgyzstan, and Tajikistan; and
- the Customs Union of Turkey and the EU.

Trade agreements among the CIS countries, although signed by all three Caucasus republics, largely have not been effective. As a result, they have been supplemented by a variety of bilateral and multilateral agreements. Georgia has concluded free trade agreements with Armenia, Azerbaijan, Kazakhstan, Russia, Turkmenistan, and Moldova. These agreements stipulate zero import duties on the products from participating countries. However, these agreements have not been ratified by the Parliament of Georgia. As a result, Georgia does not enjoy a zero import tariff and, in turn, levies full import tariffs on all CIS countries. Armenia and Azerbaijan reciprocally waive import tariffs and/or VAT for some CIS countries. Here is a telling example of the differential treatment of the CIS countries under these arrangements. In Azerbaijan, imports from Russia are subject to import tariffs and VAT; imports from Georgia and Ukraine – to VAT only; and imports from Moldova – to import tariffs only. This situation create powerful incentives to misreport the country of origin.

Even under full political normalization, the Caucasus exports to Turkey would be subject to EU regulations, including special restrictions on agricultural products and the wide use of quotas. An example of one such restriction might be Armenia's textile exports to the EU, which are free of quotas at this time. According to an Armenian trade official, this quota-free regime is mainly explained by small volumes of Armenian exports and would change if the volumes increase significantly.

Georgia is a member of the WTO, Armenia is expected to join soon, and Azerbaijan has been an observer with more remote prospects for full membership. While having an impact on import tariffs schedules, the WTO has had little other influence on regional trade so far.

Trade regime. The three South Caucasus countries levy import tariffs, VAT, and excise tax on imports. There are also (small) customs clearance fees.

Import tariffs. Armenia has a unified import tariff of ten percent; a number of commodities are exempt (the majority of which are intermediate goods and food). The overall tariff level is rather low, with a weighted average tariff at four percent.

The Georgian import tariff schedule for 2000-05 has been approved by the WTO. It has a variety of tariff levels gravitating toward 12 percent.

The Azerbaijani import tariff structure is more complicated. It has three tariff levels: 15, 5, and 0 percent. There is also a multitude of specific rates (usually expressed in Euro per physical unit). The tariffs do not look excessive and are on par with the Georgian level. Some tariff unification would help, however.

In sum, import tariff levels in the Caucasus have not constituted an obstacle for regional trade. However, tariff administration has been far from efficient, and the unclear procedures of the custom valuation of goods has led to bribes. As a result, importers have not been treated equally. There are three categories of importers: (i) paying statutory tariffs, (ii) paying bribes and a part of statutory tariffs, and (iii) smugglers paying only bribes.

The problems with corruption have been most pronounced in Azerbaijan. Georgia has also experienced similar problems, and its Government is trying to resolve them by hiring an international firm for customs clearance. Traders, however, complain that so far this has led to longer processing times.

VAT on imports in all three countries are broadly consistent with the destination principle and stand at 20 percent. Excise taxes are levied on alcohol, cigarettes, fuel, passenger cars, and some consumption ("luxury") goods.

Export taxes had been abolished in all countries (in Azerbaijan in 2000).

All Caucasus countries license trade in sensitive and potentially dangerous products, which is a normal procedure. Azerbaijan maintains an extensive export licensing system, which potentially could lead, and, by anecdotal evidence, does lead, to corruption.

Georgia licenses the export of raw materials (wood and wood products, scrap, metals, etc.), bringing about the same problems. Evidence of such corruption in Georgia includes the large discrepancy found between the values of its exports to Turkey in the mirror statistics. For instance, the value of the 1998 exports to Turkey, as reported by Georgia, was US$20.2 million. At the same time, the same year's imports from Georgia, as reported by Turkey, stood at US$91.0 million. Even if we add Armenia's exports to Turkey (US$2.9 million) to Georgia's (since they may be recorded in Turkey as of the Georgian origin), the difference will still be 3.9 times. This large a discrepancy cannot be explained by the difference in the valuation of exports and imports.

Armenia's trade regulations are quite liberal. No unnecessary export licensing is required. In all three countries, there are usual (non-tariff) regulations on the quality and certification of goods.

The major obstacles to trade are unofficial, non-tariff barriers related to corruption; little protection from extortion; and crimes against property. As a result, in all three countries, significant "facilitation" payments have to be made to ensure the reliable and timely movements of consignments. The World Bank report *Trade Facilitation in the Caucasus* asserts that, in Azerbaijan, "the movement of any consignment was impossible without the prior provision of a facilitation payment"; in Georgia, the rent-seeking behavior is of a random nature; and, in Armenia, it is less prevalent but still significant. Extortion on the road is also common. The unofficial payments on the road

are routinely included in transport tariffs. According to anecdotal evidence, in the case of Georgia, they account for from a quarter to a third of the highway tariffs.

3. Trade after Conflict Resolution

In this chapter, we discuss the potential for trade in the region in the event of conflict resolution. We focus on non-energy trade here. Energy trade is relegated to the next chapter.

3.1. Export Opportunities

There are three missing export flows in the region -- Armenia to Azerbaijan, Azerbaijan to Armenia, and Armenia to Turkey (which is, formally speaking, positive but, for all practical purposes, zero) and one restricted export flow -- Turkey to Armenia.

In order to put into perspective the current and potential export flows in industrial products outside of natural resources, we applied the gravity model developed by Baldwin to assess the potential integration of East and West European trade[4]. Baldwin's model was estimated on trade flows among the EC, EFTA, the USA, Canada, Japan, and Turkey using the random effect method with maximum likelihood correction for first-order autoregressive error. The model has the following form:

$$Ln\ X_{ij} = -17.5 - 0.88\ Ln\ D_{ij} + 0.77\ Ln\ Pop_i + 1.16\ Ln\ GDPCap_i + 0.79\ Ln\ Pop_j$$
$$(12)\quad (11)\qquad (26)\qquad (13)\qquad (25)$$

$$+1.22n\ GDPCap_j + 0.28\ Adj_{ij} + 0.53\ Block_{ij},$$
$$(16)\qquad (2)\qquad (3)$$

$R^2 = 0.99,\ DW = 2.39,$ *t-statistics in parenthesis,*

where i is the exporting country, j is the importing country, *Pop* is population, *GDPCap* is per capita GDP (in PPP), *Adj* is the dummy for adjacent countries, and *Block* is a dummy that takes on the value if the trading partners belong to a trading block.

The distances are straight lines between the capital cities ("as the crow flies"). GDP (in PPP) is expressed in 1985 U.S. dollars based on the Penn World Tables.

We used this model to calculate export flows among the three South Caucasus countries and their major partners, further referred to as "potential". The countries' GDP (in PPP) for 1996, developed by the European Comparison Project, were rebased to 1985 US dollars. In order to be compatible with the Baldwin's model, the results were converted into 1996 US dollars.

---

[4] Baldwin (1994).

Table 6. Average annual (1995-98) and potential exports

Trading partners	*Exports (USD million)*			*Partner's share (sample = 100), %*		
	Actual	*Potential*	*Potential/ Actual ratio*	*Actual*	*Potential*	*Potential - Actual*
Armenia's exports to:						
Azerbaijan	--	3,276	--	--	0.6	0.6
Georgia	7,478	22,214	3.0	3.3	4.0	0.7
Turkey	4,692	35,641	7.6	2.0	6.4	4.4
EU	63,223	230,768	3.7	27.6	41.6	14.0
Russia	72,457	79,530	1.1	31.6	14.3	-17.3
USA	5,916	101,948	17.2	2.6	18.4	15.8
Iran	38,233	44,313	1.2	16.7	8.0	-8.7
Other CIS	37,304	37,396	2.4	16.3	6.7	-9.5
Subtotal	229,303	555,087	2.4	100	100	--
Azerbaijan's exports to:						
Armenia	--	3,234	--	--	0.3	0.3
Georgia	86,813	14,575	0.2	14.1	1.5	-12.5
Turkey	60,654	35,609	0.6	9.8	3.8	-6.1
EU	92,900	384,419	4.1	15.1	40.6	25.6
Russia	124,475	205,833	1.7	20.2	21.8	1.6
USA	4,808	171,376	35.6	0.8	18.1	17.3
Iran	161,604	62,798	0.4	26.2	6.6	-19.6
Other CIS	85,038	68,172	0.8	13.8	7.2	-6.6
Subtotal	616,292	946,018	1.5	100.0	100.0	0.0
Georgia's exports to:						
Armenia	18,869	21,534	1.1	10.9	1.8	-9.1
Azerbaijan	20,148	14,312	0.7	11.6	1.2	-10.4
Turkey	29,927	73,905	2.5	17.2	6.2	-11.1
EU	20,255	495,236	16.5	11.7	41.3	29.6
Russia	56,892	238,154	11.8	32.7	19.8	-12.9
USA	4,322	211,939	3.7	2.5	17.7	15.2
Iran	2,328	63,346	14.7	1.3	5.3	3.9
Other CIS	21,100	81,761	35.1	12.1	6.8	-5.3
Subtotal	173,841	1,200,186	6.9	100.0	100.0	0.0

Table 7. Average annual (1995-98) and potential exports under growth scenario

Trading partners	*Exports (USD million)*			
	Actual	*Potential*	*Potential/Actual ratio*	*Potential minus Actual*
Armenia's exports to:				
Azerbaijan	--	6,660	--	6,660
Georgia	7,478	43,989	5.9	36,511
Turkey	4,692	65,706	14.0	61,014
EU	63,223	389,802	6.2	326,579
Russia	72,457	106,988	1.5	34,531
USA	5,916	178,417	30.2	172,501
Iran	38,233	75,805	2.0	37,572
Other CIS	37,304	61,485	1.6	24,181
Subtotal	229,303	928,853	4.1	699,550
Azerbaijan's exports to:				
Armenia	--	4,577	--	4,577
Georgia	86,813	20,197	0.2	-66,616
Turkey	60,654	45,937	0.8	-14,717
EU	92,900	454,389	4.9	361,489
Russia	124,475	193,765	1.6	69,290
USA	4,808	209,877	43.7	205,069
Iran	161,604	75,174	0.5	-86,430
Other CIS	85,038	79,158	0.9	-5,880
Subtotal	616,292	1,083,075	1.8	466,783
Georgia's exports to:				
Armenia	18,869	30,474	1.6	11,605
Azerbaijan	20,148	20,357	1.0	209
Turkey	29,927	95,341	3.2	65,414
EU	20,255	585,376	28.9	565,121
Russia	56,892	224,191	3.9	167,299
USA	4,322	259,552	60.1	255,230
Iran	2,328	75,829	32.6	73,501
Other CIS	21,100	93,877	4.4	72,777
Subtotal	173,841	1,384,997	8.0	1,211,156

In our model, export volumes are represented by total exports. This has certain disadvantage since, according to the theoretical justifications of the gravity model, the

model describes the best trade in manufactured products. It is poor at explaining trade in natural resources such as oil or agricultural products, since natural resource flows are determined by the exporters' endowments rather than GDP. However, due to data limitations, we have been unable to derive reliable estimates for manufactured exports.

Based on Table 6, we may conclude that all three South Caucasus countries tend to export less than predicted by the gravity model. The overall ratio of potential to actual exports range from 1.5 for Azerbaijan to 2.4 for Armenia to 6.9 for Georgia. (These ratios would, in fact, be even higher since current estimates do not take into account trade in agricultural products, energy, and other non-manufactured goods.)

The low export volumes can be partly explained by the physical restrictions on the movement of goods. However, a more important reason for weak export performance is the dearth of internationally competitive goods produced in the region outside of natural resources.

Geographically, the South Caucasus countries tend to trade sufficiently with politically friendly neighbors, the CIS countries and undertrade with the EU, the USA, and hostile neighbors. Neighboring markets are less competitive and have weaker quality requirements for imports than sophisticated European and American markets. Past traditions of regional trade also facilitate short-haul trade flows.

While regional trade may be boosted by conflict settlements, massive exports to the developed nations would not happen without a major industrial restructuring.

With higher income levels, trade potential would indeed be higher. Table 7 presents potential export volumes under the World Bank projections of the GDP levels and country populations in 2002. Under this scenario, the ratio of potential to current trade would increase to 1.8 for Azerbaijan, 4.1 for Armenia, and 8.0 for Georgia. The largest potential gains would be for exports to the EU and the USA. In case of Azerbaijan, a number of regional partners might see a reduction in exports, redirected to other destinations.

The above analysis suggests the following magnitudes of missing exports (the lower bound represents exports flows under the GDP levels in 1996; the higher bound uses the projected 2002 GDP levels): Armenia to Azerbaijan – US$3.2-6.7 million, Armenia to Turkey – US$35.6-65.7 million, Azerbaijan to Armenia – US$3.2-4.6 million.

A number of case studies show that export opportunities can be associated with the opening of borders. The World Bank study on the prospects for Armenia exports[5] indicated the advantage of products with high value-to-weight ratio, in order to overcome the geographic factor. However, if regional borders open, the weight restriction may be relaxed. For instance, there may be a good market for Armenia's building materials

[5] Hurwitz (1995).

industry (cement, building stone, tile) in Turkey and Azerbaijan. At the present time, capacity utilization in the industry is extremely low due to low domestic demand and physical barriers to trade: Cement plants are used at below 20 percent of capacity, and stone and tile production stands at about five percent of capacity. If the production capacity were more fully utilized, production could increase by US$40 to 80 million a year. Also, by lowering transport costs, existing exports of low value-to-weight products, such as non-ferrous metal (copper, molybdenum, zinc) ores, concentrates, and synthetic rubber would become more profitable and go up in volume.

Supply side

Outside natural resources and semi-finished products produced on the Soviet-era plants, the South Caucasus countries have a rather limited export base. Necessary conditions for improved export performance include industrial restructuring and large new investment, especially foreign (which facilitates access to foreign markets and places local producers in international distribution networks). Neither will happen without a major improvement in the business climate. Recent international surveys, including the World Bank/EBRD survey, indicate grave problems in this area. The business climate rankings of the South Caucasus countries are consistently placed at the bottom of the CIS and transition economies as a whole. Official corruption and red tape are regular occurrences, property rights are poorly protected, and the agency problems abound. A marked improvement in the business climate and in its perception by investors will take a long time, if ever.

Also, the usual problems of the post-Soviet industrial sector have to be addressed, including/especially insufficient working capital, managerial and marketing problems, incomplete restructuring, etc. For instance, Armenia's massive engineering sector has largely lost its markets in the CIS, mostly Russia. Equipment and parts for the defense sector, as well as relatively low-quality industrial and household equipment, composed traditional engineering exports. The markets for most of these products have ceased to exist. It is the problems with the identification of new (that is, old geographically but very much changed) markets and the inflexible product mix that make it very difficult to restart exports to the CIS. Therefore, a mere reduction of physical trade barriers is not enough to bring about needed revolutionary changes in export performance.

If progress towards the improvement of the business climate and industrial restructuring remains weak, it is doubtful that the potential of export creation will be fully realized.

Trade in energy and natural resources presents the most obvious export opportunities. It is discussed in detail in Section 4.2. In sum, the Armenian exports to Turkey could increase by as much as US$230 million or more, thanks to the exports of electricity and construction materials. This figure equals total Armenian exports in 1999.

Table 8. Comparison of Selected Wholesale Prices in Armenia, Azerbaijan and Turkey, 1998

		(As percent of Turkey)		
Commodities		*Azerbaijan*	*Armenia*	*Georgia*
Energy Products				
Average		**20%**	**44%**	**32%**
Electric power	KWh	33%	39%	33%
Gasoline	Ton	18%	32%	29%
Diesel oil	Ton	27%	49%	
Natural gas	M3	10%	55%	33%
Agricultural Products				
Average			**104%**	
Wheat	KG	67%	111%	101%
Barley	KG		131%	85%
Sunflower seed	KG		218%	89%
Beef and veal	KG	16%	34%	
Poultry	KG		113%	158%
Wool	KG	6%	33%	42%
Eggs	Unit	123%	163%	85%
Butter	KG		41%	46%
Crystal Sugar	KG	69%	55%	61%
Wheat flour	KG	87%	144%	177%
Fertilizers				
Average		**74%**	**67%**	**149%**
Urea	Ton	103%	84%	46%
DAP	Ton	42%	50%	61%
TSP	Ton	77%		177%
Timber				
Average		**62%**	**36%**	
Heavy logs	M3	65%	60%	
Plywood	M2		13%	
Sawnwood	M3	59%		
Copper	Ton		51%	
Portland Cement	KG	126%	78%	62%

Table 9. Comparison of Selected Retail Food Prices in Armenia, Azerbaijan and Turkey, 1998
(As percent of Turkey)

Products		*Azerbaijan*	*Armenia*	*Georgia*
Veal	KG	50%	42%	52%
Pork		n.a.	n.a.	n.a.
Margarine	KG	86%	78%	108%
Butter	KG	41%	37%	42%
Milk	L	72%	45%	71%
Eggs	Unit	125%	123%	112%
Bread, wheat	KG	80%	69%	67%
Crystal sugar	KG	82%	67%	73%
Potatoes	KG	169%	96%	141%
Average		**88%**	**70%**	**83%**

Sources: Statistical agencies of Armenia, Azerbaijan, Georgia, and Turkey.

Azerbaijani exports to Armenia could reach US$120 million, increasing total exports by US$100 million[6], which equals ten percent of total exports.

3.2. Price Levels

Fully realizing that domestic price levels are determined by a multitude of factors, many of which fall outside foreign trade (including the exchange rates of local currencies, taxes, internal transport costs, wholesale trader markups, etc.), we still would like to compare and put into perspective the price levels in the three South Caucasus countries. Tables 8 and 9 present the comparative average prices of main commodity groups, including fuel and energy, agriculture and food, investment, and intermediate goods, among Armenia, Azerbaijan, Georgia, and Turkey. As these data refer to 1998, they do not take into account the different currency devaluation situations in the South Caucasus countries after the Russia crisis: Georgia has significantly devalued its currency after 1998, while Armenia and Azerbaijan have not. Therefore, the relative prices in Georgia today vis-à-vis Armenia and Azerbaijan would be lower today than in 1998. Nevertheless, the above data might give some interesting insights.

As the data suggest, with respect to Azerbaijan, Armenian energy and agricultural prices are twice as high. Prices for fertilizers and timber are on par. The price of cement in Armenia is a third lower than it is in Azerbaijan and a fifth lower than in Turkey.

[6] Export flows worth US$20 million could be rerouted to Armenia from more distant destinations.

With respect to Georgia, Armenian energy prices are higher, and agricultural prices are at the same level.

Retail food prices are lower in Armenia than in its Caucasus neighbors, which may indicate lower retail markups.

The above data suggest that trade blockades play a role in pushing Armenia's energy prices upward. High energy prices constitute an implicit tax on both production and consumption.

High agricultural prices in both Armenia and Georgia with respect to Azerbaijan reflect somewhat inferior agroclimatic conditions in the former two countries. Whilst there are no formal trade barriers between Georgia and Azerbaijan, and the cost of transporting agricultural products between Azerbaijan and its neighbors does not exceed a quarter of the unit value, the price differential between the two countries remains very large. This situation may be explained by informal barriers and the underdeveloped, disjointed nature of agricultural markets in the region.

If trade in the region frees up, Armenia would benefit from lower energy prices.

At the same time, the agricultural sectors of Armenia and Georgia would likely come under competitive pressure from Azerbaijan, if the regional market become more integrated. Increased export opportunities would be beneficial for the depressed Azerbaijani agriculture but potentially could negatively affect rural incomes and rural poverty in the other Caucasus countries.

The large price differential of Armenian cement with respect to both Azerbaijan and Turkey signals that Armenia could restart its traditional exports of construction materials to the neighbors, despite the high transportation costs of these products.

The potential benefits arising from a domestic price decrease could be shared between consumers, producers, and traders. Consumers will increase their utility level, producers will enjoy lower input prices (e.g., energy) but face increased foreign competition, and traders might absorb part of the savings as higher margins.

3.3. Transport savings

Through our interviews with transportation firms and traders, we obtained transport costs for the main trading commodities; we also assessed the economic benefits arising from shorter transport routes that would be open in a normal political situation. The difference between current and optimal costs constitutes deadweight losses incurred by firms (through lower profit margins) and households (through higher prices). Two methods were used to estimate these losses. We would like to emphasize that these estimates are based on the currently observed volumes of trade. The opening of borders

Table 10. Economy on transportation of Turkish exports to Azerbaijan, 1999 data

	Transp. costs, % of UV		*Value,*	*Transp. costs, 000 $*		*Economy, 000 $*	
Commodities	*Min*	*Max*	*000$*	*Min*	*Max*	*Min*	*Max*
Total			**73601.7**	**5223.7**	**16035.1**	**522.4**	**1603.5**
Equipment for TV and radio transmission	5	10	10913.2	545.7	1091.3	54.6	109.1
Electric power			6973.9	N/A	N/A	N/A	N/A
Sugar and granulated sugar	10	25	5492.2	549.2	1373.1	54.9	137.3
Iron structures and parts	10	50	4661.6	466.2	2330.8	46.6	233.1
Equipment for wheat processing	10	50	4213.1	421.3	2106.6	42.1	210.7
Wheat flour	10	25	3512.6	351.3	878.2	35.1	87.8
Refrigerators and freezers	5	10	3371.9	168.6	337.2	16.9	33.7
Aluminum structures and parts	10	50	3060.8	306.1	1530.4	30.6	153.0
Package equipment	5	10	2887.4	144.4	288.7	14.4	28.9
Synthetic fabrics	5	10	2708.9	135.4	270.9	13.5	27.1
Margarine	10	25	2543.2	254.3	635.8	25.4	63.6
Furniture and parts	5	10	2330.6	116.5	233.1	11.7	23.3
Birds eggs in shell	10	25	2077.8	207.8	519.5	20.8	51.9
Plastic construction comm.	10	50	1978.8	197.9	989.4	19.8	98.9
Synthetic washing preparation	10	25	1851.7	185.2	462.9	18.5	46.3
Other sweets	10	25	1515.4	151.5	378.9	15.2	37.9
Sunflower oil	10	25	1444.3	144.4	361.1	14.4	36.1
Confectionery products	10	25	1187.5	118.8	296.9	11.9	29.7
Paper products for housing	5	10	1178	58.9	117.8	5.9	11.8
Ventilators	5	10	1172.5	58.6	117.3	5.9	11.7
Cars- new	5	10	1094.8	54.7	109.5	5.5	10.9
Soap	10	25	959	95.9	239.8	9.6	24.0
Water pumps	5	10	921.5	46.1	92.2	4.6	9.2
Other conditioners	5	10	867.4	43.4	86.7	4.3	8.7
Doors wood	10	50	867	86.7	433.5	8.7	43.4
Cosmetics	5	10	822.5	41.1	82.3	4.1	8.2
Tea	10	25	730.6	73.1	182.7	7.3	18.3
Macaroni products	10	25	535	53.5	133.8	5.4	13.4
Cooling compressors	5	10	512.6	25.6	51.3	2.6	5.1
Potatoes	10	25	450	45.0	112.5	4.5	11.3
Fruits and vegetables juice	10	25	447.1	44.7	111.8	4.5	11.2
Garlic and onion	10	25	318.8	31.9	79.7	3.2	8.0

would certainly push trade volumes higher, but it is difficult to predict by how much. Thus, the estimates below should be considered conservative.

Method 1 uses the minimum and maximum estimates of the shares of transport costs in the unit values of specific commodities given by traders and the estimates of transport cost reduction from realigning routes by transportation companies. Hence, the estimates of transport savings are derived. If s_i is the share of transport cost in unit value, e_i is the potential economy in transport costs, and V_i is the value of trade (imports or exports) of commodity i, then total economy equals $\Sigma_i (V_i s_i e_i)$.

Method 2 is based on the information about transport costs per unit of cargo (such as container, truckload, rail car) provided by transport companies and trade volumes in physical units compiled by the statistics agencies. This method will also gives an interval estimate because actual loading factors (i.e., how many tons on average are loaded in a container or in a truck) are unknown and we have to assume minimal and maximum loading factors. If t_i is transport cost per unit of cargo, e_i is the potential economy in transport costs, and H is the physical volume of trade, then total economy equals $\Sigma_i (H_i t_i e_i)$.

Table 10 shows an example of such calculations using Method 1.Transport savings arising from opening borders presented below are obtained with these methods.

Armenia

Armenia would benefit from straightening two circuitous routes – with Turkey and Iran – and from using Turkish ports for transshipments. Armenia's use of the Georgian territory for transit will significantly decrease. Trucking costs between Armenia and Turkey would at least halve as a result. This estimate does not include general cargo, most of which would continue to go via sea and railway rather than by road. A percentage of general cargo might be sent via road for crossborder and short distance trade. However, since no current estimates are available, we did not attempt to gauge the magnitude of this flow and so kept the estimates on the conservative side. The transport savings for Turkish imports into Armenia vary between US$0.6 and 0.8 million, based on the 1999 data. However, if the higher, 1998 trade volumes are assumed, the savings will rise to US$0.9 to 1.2 million. Armenian exports to Turkey are currently very small, so no significant savings could be achieved at these low volumes.

In addition to savings in money, the direct link between Armenian and Turkish road systems would increase the availability, predictability, and reliability of shipping services. These features, currently unavailable for South Caucasus exporters/importers, are as important as transportation costs – if not more so. The benefits will be shared by Armenia and its Caucasus neighbors. In this case, Armenia would become a transit country rather than "the end of the line".

If the Turkish port of Trabson were to be used for the transshipments of Armenian trade goods instead of the Georgian port of Poti, the ground share of container transport costs would decrease by one-fourth. General cargo would probably continue to flow through Poti, since Trabson has no rail link. It is more economical to use rail cars than trucks for general cargo. Currently, about 5,000 containers per year pass through Poti on their way to/from Armenia. At a transshipment cost of $1,400 for a 20 foot container and a $1,800 cost for a 40 foot container, the savings would range from US$1.8 to 2.0 million a year.

If the Turkish port Mersin on the Mediterranean coast were used instead of Poti, it will help to eliminate transshipments from/to Mediterranean ports en route to North America, West Europe, and Asia[7]. Estimates indicate that this might result in as much as a 65 percent transport savings for general cargo[8]. However, the inability of Turkish railways to handle the massive transit of general cargo raises doubts about the viability of this scheme.

Ground transportation costs to/from Iran would go down by at least one-third if the road via Nakhichevan rather than Megri is used. This would result in savings ranging from US$3.6 to 4.8 million for Iranian imports to Armenia and from US$0.4 to 0.8 million for Armenian exports to Iran.

Total transportation savings for Armenia would amount to US$6.4-8.4 million. The 1999 BOP shows a US$63.6 million debit in freight services and a US$30.3 million deficit. Hence, the savings would decrease the debit by 10-13 percent and the deficit by 21-28 percent.

The effect on Russian transit to Armenia via Georgia would be only minor, since the majority of Russian exports are energy (natural gas and nuclear fuel), which do not use sea or rail routes. The transit of Armenian exports to Russia currently sent via Azerbaijani railway through Georgian intermediate addresses would become easier and quicker to arrange if the intermediary is eliminated. Substantial cost savings would arise only if Armenia were to enter railway tariff agreements with Azerbaijan.

Azerbaijan

Opening the road between Azerbaijan and Turkey via Armenia would reduce the transport cost between the two countries by ten percent. Trade is currently conducted via Georgia or Iran. Not all trade flows should be included in the calculations of potential transport savings. Twenty-nine percent of trade goods are delivered by sea and railway via Georgia rather than by road, since it is mainly general cargo, for which road transportation is not economical. Also, it is unrealistic to assume that transit through

---

[7] The shallow-water port Poti cannot accept large ocean-going vessels necessitating transshipments in smaller, so-called feeder, ships from/to Mediterranean ports. Container ships are smaller and can enter Poti. They do not require transshipments in the Mediterranean. Therefore, the above estimates refer to general cargo rather than containers.

[8] Hurwitz' estimate quoted in *Transport Sector Review* (1995).

Georgia and Iran will cease completely. Therefore, we have applied a correction factor of 0.5 to cost economy estimates. The final estimates range from US$0.5 to 1.2 million for imports and from US$0.2 to 0.6 million for exports (based on 1999 data). Total savings are in the range of 0.7-1.8 million dollars, or 1-3 percent of the 1999 debit in freight services in the BOP.

Georgia

As mentioned above, Georgia is likely to lose a part of its transit traffic to/from Armenia if the Turkish border with Armenia opens. Mostly container traffic would be affected. Much of long-haul general cargo would probably continue to travel through Georgia by rail and sea, since the Turkish railways are not likely to be used for mass transit of goods due to their low technical capacities.

Using the data provided by the authorities of the port of Poti, we have estimated current container traffic between Armenia and the rest of the world through Georgia at 5,000 units per year. Interviewed forwarders have estimated that, if Turkish ports were used instead of Poti, the road portion of transportation would cost 25 percent less. At the current cost of $1,400 per 20 foot container and $1,800 per 40 foot, and the estimated 80 percent share of 20 foot containers, this amounts to a total potential savings of US$1.9 million. If a quarter of the traffic still continued to use Poti, the estimate would stand at US$1.4 million. The resulting loss of transit revenues to Georgia would range between US$5.6 and 7.4 million dollars, or 16-21 percent of the surplus in cargo services in the BOP.

4. Trade in Energy

4.1. Current Flows

Energy flows have immense importance in the region. Armenia and Georgia are the importers of petroleum and natural gas. The economies of these countries are very dependent on fuel imports. The disruption of fuel supplies in the early 1990s brought these economies to nearly total collapse. Armenia has large surplus electric power capacities. Azerbaijan has relatively large proven resources of oil and gas but is a net importer of power. (This happens not because of a lack of generating capacities but due to disruptions in the fuel supply to power stations caused by payment problem.) It should be noted that all countries in the region export and import electric power on a swap basis in order to smoothen seasonal and peak differences.

The major energy flows in the region are as follows.

Armenia imports natural gas and nuclear fuel from Russia. Petroleum products are imported from a variety of destinations, including Iran, Georgia, East and West Europe, and, recently, Turkey. It exports electricity to Georgia and Iran.

Georgia imports natural gas from Russia, oil and petroleum products from Azerbaijan, Iran, and the Gulf states. Georgia exports electric power to Turkey, Azerbaijan, and a very small amount to Russia (it is, in fact, a net importer).

Azerbaijan imports electric power from Turkey, Iran, Georgia, and Russia. It exports oil and petroleum products to Russia, Turkey, Iran, Georgia, the Gulf states, and outside of the region, to the CIS, Europe, and other destinations. Azerbaijan exports electric power to Russia, Iran, Georgia, being a net importer of power.

4.2. Flows after Conflict Resolution

4.2.1. Electric Power

The greatest efficiency would be achieved if the South Caucasus countries and their neighbors operated as one system. This would economize particularly on generation capacity investments. It would also allow for more economic dispatch. For instance, Armenia sometimes spills water at its low-cost hydro stations, given the lack of export opportunities, in order to run its nuclear capacity at its minimum efficient level. While Armenia is doing that, Georgia might be running the high-cost thermal units at Gardabani.

There are a number of reasons why the systems are not integrated. One is straightforward: Armenia cannot trade electricity directly with Turkey or Azerbaijan for political reasons (even though Turkey has electricity shortages). Another is more complex: For technical reasons, Armenia and Georgia cannot safely operate in parallel with Russia and Iran unless Azerbaijan joins in. This requires a level of cooperation between Armenia and Azerbaijan that has not yet been achieved. Since Armenia operates in parallel with Iran, and Georgia with Russia, this restricts Armenian electricity trade with Georgia.

Armenia by far has the most excess generating capacities in the region. This capacity can be used if new markets for energy (especially Turkey) are opened. An increase in power exports of Georgia and Azerbaijan will be rather small. The excess annual average generating capacity of Armenia is conservatively estimated at 1,000 MW. That will allow exports of over US$190 million worth of energy at the average unit value for Armenian exports in 1999 of 2.8 cents per KWh.

Armenia's power export has a high import content (natural gas and nuclear fuel currently imported from Russia). The import content of the above additional power generation would stand at US$100 million a year. If the unit values of gas decrease by 25 percent (in the case of the substitution of Russian gas by Azerbaijani), the import content would go down to US$80 million. This number will go further down if the efficiency of generation increases due to better use of capacity.

The realization of the above export potential is dependent on investment needed to upgrade and replace the aging and neglected power generation capacities and

distribution systems, including the proposed closure of the nuclear plant. According to World Bank staff estimates, medium-term investment requirements in the sector amount to US$300 million.

4.2.2. Natural gas

Currently, Russia and Azerbaijan are the main gas suppliers in the region.

In the case of conflict resolution, Armenia may fully or partially substitute Russian natural gas with gas from Azerbaijan. Though the price of natural gas is difficult to predict due to the localized and *ad hoc* nature of the gas market (especially in the CIS), lower transport costs would probably result in a 25 percent savings,[9] or about US$25 million a year. For Azerbaijan, this would mean US$100 million in extra exports. However, the existing infrastructure has not been used in almost ten years and the technical condition of the pipelines may call for investments, or even for new pipeline construction. Therefore, these savings look uncertain.

Longer-term prospects for Azerbaijani gas are related to the Turkish market. Turkey is the only reliable paying gas market in the region, and there is high competition for this market among regional producers. The gas markets in the CIS suffer from non-payment problems. Turkey has entered into an agreement to purchase 16 billion cubic meters delivered via the proposed Trans-Caspian pipeline that is likely to traverse Turkmenistan, the Caspian Sea, Azerbaijan, and Georgia.

There is much argument about the prospective gas pipeline routes, which will determine what countries will benefit from gas transit. The possible transport of Azerbaijani gas to Turkey requires multi-billion dollar investments and cannot bring any short-term effects.

4.2.3. Oil and petroleum products

The short-term effects of peace on crude oil transit will be trivial. The only existing pipeline runs through Georgia. Any new pipelines will require large investments and a long construction time. After much debate over the possible routes for transporting Caspian oil, in October 2000, Azerbaijan and a group of foreign sponsors (including companies from the UK, Norway, Turkey, Japan, and the U.S.) signed an agreement of financing oil pipeline from Baku to the Turkish Mediterranean port of Ceyhan. The US$2.4 billion pipeline with an annual capacity of 17 million tons of crude is expected to be completed in 2004. Nevertheless, the economic viability of the project is still to be evaluated. This pipeline would traverse Azerbaijan, Georgia, and Turkey.

Petroleum products are affected by closed borders in a qualitatively similar manner to general consumer goods and intermediates traded in the region. The price-raising effect comes from circuitous transport routes. However, there is an extra dimension of non-existing trade. The prime example would be the export of oil products

[9] According to *Trade Facilitation* (2000).

Table 11. Selected potential effects of trade normalization in South Caucasus

(U.S. Dollars Million)

	Armenia	*Azerbaijan*	*Georgia*
Transport savings	6.4-8.4	0.7-1.8	
Savings from using lower-cost energy	45		
Missing exports	268.9-342.4	103.2-104.6	
Including:			
gravity model	38.9-72.4	3.2-4.6	
natural resources/ energy	255-296	100	
Total effect	320.3-395.8	103.9 – 106.4	
Complementary imports	80-100		
Total effect minus complementary imports	220.3-315.8	103.9 – 106.4	
As percent of 1999 trade deficit	38-54	25 - 26	
Loss of transit revenues			7.4
As percent of 1999 trade deficit			1.4

Source: Author's calculations.

from Azerbaijan to Armenia. The sale of Azerbaijani oil products to Armenia using the same terms as they used with other countries, would lead to a cost reduction of 25 percent,[10] or over US$20 million. These savings result from more than merely straitening supply routes to Armenia, meaning that Azerbaijani exports will probably replace those of other countries. However, Azerbaijan has production constraints on the volume of its petroleum exports and, in any case, would be able to export all it wants. Therefore, it cannot be stated that there is a potential for increasing Azerbaijani export volumes thanks to the opening of the Armenian fuel market.

5. Effects on the BOP

This chapter sums up the potential benefits of trade normalization developed in the previous chapters.

[10] Ibid.

The estimates (see Table 11) are on the conservative side and represent only a part of potential short-term benefits.

Armenia would annually save US$6-8 million on the transport costs of non-energy imports and US$45 million on switching the flows of natural gas and petroleum products to new sources. Though this reduction in transportation services would be shared between domestic and foreign providers, most of it would reduce current deficit, because foreign transport companies dominate the market and their services are shown as debit in the BOP.

The potential increase in exports would range from US$269 to 342 million a year, more than doubling total exports. At the same time, the complementary imports necessary to sustain this increase in exports would stand at around US$100 million. The resulting improvement in BOP would exceed US$220 million, or 38 percent of the current trade deficit.

The potential new export volume equals 15 - 19 percent of GDP. However, exports are likely to have a multiplier effect on GDP. Assuming a (modest) multiplier of 2.0[11], the increase in exports may lead to up to 30 - 38 percent of the GDP growth.

Impressive as it is, these estimates fall far short of the widespread expectations about potential economic performance in the case of trade liberalization in the region. On more than one occasion, the author has encountered local economists and officials projecting doubling GDP. Without profound (and protracted) economic restructuring, these expectations are hardly realistic.

Azerbaijan could increase its exports by US$100 million, or 11 percent of the current level, slashing the trade deficit by a quarter. As a result, GDP would increase up to five percent.

Georgia might face a reduction of transit through its territory. Nevertheless, it is unlikely to exceed a quarter of the freight service surplus in the BOP, or 1.5 percent of trade deficit. At the same time, the country would benefit from the effects of regional cooperation. The most obvious example would be the integration of the electric power systems that would bring about large efficiency gains.

6. North-South transit

This chapter takes up (the highly debated) issue of possible strategic changes in trade flows from the dominant East-West to include currently less important North-South direction of trade.

[11] For example, Beilock (1999) assumed exports-to-GDP multiplicator for Armenia at 3.0.

It is tempting to think that, when the countries in the region drastically increase their trade with the Gulf states, supported by the existing (but currently blocked) railway, the currently dominant East-West trade flows would be supplemented with the North-South flows. This new route might be also thought of as a transit path to Russia and Central Asia.

This scenario, however, has many potential problems making it very hard to firmly justify it at this time. The Nakhichevan-Iran rail link, even when used during Soviet times, had a small cargo capacity. In the past decade, the unused infrastructure has fallen into disrepair and has been vandalized. Significant investments are now needed to restart even a modest regular service. To update this link sufficiently to handle higher cargo volumes, investments must increase manifold.

Another example of North-South route is the highway between Iran and Azerbaijan. It is currently used to link the Persian Gulf (Iranian port Bandar-Abbas) with the CIS railway system. Highway transport costs are low due to cheap fuel prices in Iran, and the reliability of service is good thanks to Iran's quality road grid and highly reputable trucking companies. Nevertheless, there are no transit flows at present. Russia is better served by northern Black Sea ports and Central Asia -- by Poti and railway.

Nevertheless, if and when such a transit flow might emerge is an open question. Geography might suggest such a possibility in the future, but it must be supplemented by infrastructure development. There is interest in this issue among such countries as Russia, Iran, and India, which has recently signed a protocol on the development of the North-South transport corridor through the Caspian Sea. A land transport corridor might also draw some attention in the future. Another major transport initiative, TRACECA, aims at developing a East-West corridor through the Caucasus and the Caspian Sea to Asia. If it is successful, the developed infrastructure would greatly reduce the capital requirements for the North-South corridor.

7. Conclusions

Current situation

The South Caucasus countries have been maintaining high trade deficits. Their main exports are base commodities and energy. Tariff barriers to trade are modest. Non-tariff, unofficial barriers constitute more pronounced obstacles to trade.

Disrupted traditional transportation routes stifle the export and import capabilities of Armenia and Azerbaijan. At the same time, Georgia enjoys some benefits of higher-than-normal transit through its territory. Trade in some important commodities does not exist, including the export of gas from Azerbaijan to Armenia and of electricity from Armenia to Turkey.

Transit fees in Armenia and Georgia constitute a significant portion of transport tariffs thus further raising the costs of trade.

Trade blockades contribute to the elevated prices of energy in Armenia, which are double the Azerbaijani levels. High energy prices constitute an implicit tax on both production and consumption. Regional agricultural trade is very weak despite the differences in prices and endowments.

Nevertheless, trade restrictions have had a tendency to ease over time. Partners in the immediate trading neighborhood, in many cases, have founds ways to resume trade, albeit at extra cost (i.e., Turkey-Armenia trade via Georgia, Armenia-Russia trade via Azerbaijan). Overseas flows have also established reliable routes. As a result, the freight factor in Armenia, which provide a broad measure of the relative cost of transporting trade goods, has decreased.

Applying a gravity model to the regional trade, we concluded that the South Caucasus countries tend to trade sufficiently with the CIS countries and politically friendly neighbors and undertrade with the EU, the USA, and hostile neighbors. It may be explained by well-established trade links and by weaker competition and lower quality requirements for goods in the CIS markets than in more sophisticated European and American markets.

Peace benefits

If the blockades are lifted, trade distortions will be alleviated, bringing about positive short-term welfare effects including: (i) more rational trade flows; (ii) resumption (or a major increase) of regional trade in some major commodities such as energy; and (iii) lower prices and/or higher profit margins on some important consumption and production goods.

Potential peace benefits are especially high for Armenia. First, Armenia could more than double its total exports if the Turkish and Azerbaijani markets are opened. This would erase almost a half of Armenia's dangerously high trade deficit and would lead to a 30 percent GDP growth in the short-run. Due to a high import content of its potential exports, Armenia would generate a strong demand for imports, offering trade opportunities for regional partners. Second, considerable savings would result from straightening transport routes and switching to closer supply sources. Armenia could save over US$50 million a year, which would more than erase the deficit in freight services in the BOP and relieve the pressure on its domestic prices, especially energy.

Azerbaijan could increase its exports by US$100 million, or 11 percent of the current level, reducing trade deficit by a quarter. As a result, GDP would increase up to five percent. It could also benefit from some transport savings arising from exports and imports.

Georgia might face a reduction of transit through its territory. Nevertheless, it is unlikely to exceed a quarter of the freight service surplus in the BOP, or 1.5 percent of

trade deficit. At the same time, the country would benefit from the effects of regional cooperation.

Opening up the borders would bring positive systemic effects, especially in the energy sector. The regional electric power system would achieve the greatest efficiency if operated as one system.

A direct link between Armenian and Turkish road grids would improve availability, predictability, and reliability of shipping services for all Caucasus countries.

The prospects for a North-South transit corridor across the South Caucasus are of a longer-term nature and would require considerable investment, the economic efficiency of which is not clear at this time.

A political settlement *per se* would not bring about immediate and drastic changes in the overall economic performance in the South Caucasus, given the region's current poor business environment and its incomplete industrial restructuring. Widespread expectations to the contrary are hardly realistic. Too many overoptimistic projections of peace benefits circulate in the region.

Thus, each country could benefit greatly from the following:

- Improve the foreign trade international environment by better implementing the trade agreements among the CIS countries and concluding new agreements with other trade partners, especially Turkey and the EU;

- Open the Armenian-Turkish and Armenian-Azerbaijani borders for trade. WTO membership and the bid of Turkey and Armenia to join the EU could be used to facilitate the normalization of trade;

- Include Armenia in the Xerox/Baku railway tariff agreements. Improve the state regulation of railway firms to insure the effectiveness of international tariff agreements;

- Reduce transit fees on a reciprocal basis;

- Eliminate the unofficial extortion on the road (especially, in Georgia and Azerbaijan);

- Streamline and increase efficiency of the customs; reduce corruption in customs administration;

- Equalize import taxation for all flows[12];

[12] An example of discriminatory taxation of imports can be found in Armenia. The current rules exempt physical persons for VAT if the volume is under specified threshold while fully tax legal persons. The firms (legal persons) widely use this loophole to minimize VAT payments by hiring physical persons to import on their behalf.

- Consider financial support for trade facilitation by international organizations, including the World Bank, contingent on the progress towards conflict resolution. Trade flow optimization will require investments even in the short-run, when only the existing infrastructure is used.

REFERENCES

A Review of Statistics on Trade Flows in Services, WTO, November 1997, Document # 97-4917.

Baldwin, Richard E. 1994. *Towards an Integrated Europe*, Centre for Economic Policy Research.

Beilock, Richard. "Armenia's Economic Dead End". Working Paper of the University of Florida, 1999.

Hurwitz, Elliott. *Prospects for Armenian Exports: Case Studies of 21 Enterprises*, The World Bank, 1995.

Trade Facilitation in the Caucasus, The World Bank, Washington, DC, 2000.

Transport Sector Review for Armenia. The World Bank, Washington, DC, 1995.

Annex

Transit fees

1. Armenia

For each transport entering the RA territory ,which is registered in a foreign country, the ecological charges are collected at the following rates:

TYPE OF TRANSPORT	AMOUNT (AMD)
for passenger car	2500
for bus with less than12 seats	5000
for bus with 12 and more than 12 seats	10000
for truck with up to 8 tons tonnage	5000
for truck with 8 - 20 tons tonnage	10000
for truck with 20 and more tons tonnage	15000

Transit fees

For any quantity of goods passing transit by the territory of the Republic of Armenia an amount equal to US$20.00 is collected, except the goods passing for the Republic of Georgia, for which an amount equal to US$100.00 is collected.

In accordance with the law of RA "On transit payment", transportation facilities registered in other countries for using public automobile routes of the Republic of Armenia pay the following route tariffs for each entrance:

N/N	**Type of vehicle**	**The amount of the tariff (in Drams)**
1.	**passenger cars with up to 7 seats**	**10 000**
2.	**buses with up to 13 seats**	**20 000**
3.	**buses with from 13 to 30 seats**	**40 000**
4.	**buses with 30 and more seats**	**60 000**
5.	**trucks and trailers with up to 1.5 tons carrying capacity**	**15 000**
6.	**trucks and trailers with from 1.5 to 3 tons carrying capacity trucks**	**25 000**
7.	**trailers with from 3 to 5 tons carrying capacity**	**40 000**
8.	**trucks and trailers with from 5 to 10 tons carrying capacity trucks**	**65 000**
9.	**trailers with from 10 to 20 tons carrying capacity**	**80 000**
10.	**trucks and trailers with from 20 to 36 tons carrying capacity**	**110 000**
11.	**trucks and trailers with 36 and more tons carrying capacity**	**150 000**

The route payment is collected by the Customs officers at Customhouses at the entrance of transportation facilities registered in other countries on the territory of the Republic of Armenia.

2. Georgia

Road tax is levied on all foreign vehicles crossing the Georgian territory. The tax depends on the type of vehicle and the weight of a cargo. If the vehicle is loaded above its capacity, for each additional ton additional tax is paid.

Road tax schedule (for all foreign vehicles)

Vehicle type	*Tax (GEL)*	*For each additional ton*
Cars	60	
Vans (up to 13 passenger seats)	115	
Vans (13-30 passenger seats)	230	
Buses (30+ passenger seats)	380	
Trucks (up to 3 tons)	230	23 (10% of tax)
Trucks (3-10 tons)	380	38 (10% of tax)
Trucks (10-20 tons)	480	48 (10% of tax)
Trucks (20-40 tons)	650	32.5 (5% of tax)
Trucks (40+ tons)	880	44 (5% of tax)

Plus there is extra charge for each additional axle.

Policy Research Working Paper Series

	Title	Author	Date	Contact for paper
WPS2577	Developing Rainfall-Based Index Insurance in Morocco	Jerry Skees Stephanie Gober Panos Varangis Rodney Lester Vijay Kalavakonda	April 2001	P. Kokila 33716
WPS2578	How Accession to the European Union Has Affected External Trade and Foreign Direct Investment in Central European Economies	Bartlomiej Kaminski	April 2001	L. Tabada 36896
WPS2579	Public Health and Education Spending in Ghana in 1992–98: Issues of Equity and Efficiency	Sudharshan Canagarajah Xiao Ye	April 2001	M. Clarke 31752
WPS2580	On "Indirect" Trade-Related Research and Development Spillovers	Olivier Lumenga-Neso Marcelo Olarreaga Maurice Schiff	April 2001	L. Tabada 36896
WPS2581	Securities Clearance and Settlement Systems: A Guide to Best Practices	Mario Guadamillas Robert Keppler	April 2001	H. Issa 30154
WPS2582	Development Financing during a Crisis: Securitization of Future Receivables	Suhas Ketkar Dilip Ratha	April 2001	S. Crow 30763
WPS2583	How the Location of Roads and Protected Areas Affects Deforestation in North Thailand	Maureen Cropper Jyotsna Puri Charles Griffiths	April 2001	V. Soukhanov 35721
WPS2584	Structural Adjustment and Forest Resources: The Impact of World Bank Operations	Kiran D. Pandey David Wheeler	April 2001	Y. D"Souza 31449
WPS2585	Law, Politics, and Finance	Thorsten Beck Asli Demirgüç-Kunt Ross Levine	April 2001	A. Yaptenco 31823
WPS2586	On the Urbanization of Poverty	Martin Ravallion	April 2001	C. Cunanan 32301
WPS2587	Growth is Good for the Poor	David Dollar Aart Kraay	April 2001	E. Khine 37471
WPS2588	The Regulation and Supervision of Banks around the World: A New Database	James R. Barth Gerard Caprio Jr. Ross Levine	April 2001	A. Yaptenco 38526

Policy Research Working Paper Series

	Title	Author	Date	Contact for paper
WPS2589	Implementing the Market Approach to Enterprise Support: An Evaluation of Ten Matching Grant Schemes	David A. Phillips	April 2001	S. Torres 39012
WPS2590	Household Welfare and Poverty Dynamics in Burkina Faso: Empirical Evidence from Household Surveys	Hippolyte Fofack Célestin Monga Hasan Tuluy	April 2001	N. Nouviale 34514
WPS2591	Hirschmanian Themes of Social Learning and Change	David Ellerman	April 2001	B. Mekuria 82756
WPS2592	Management of Oil Windfalls in Mexico: Historical Experience and Policy Options for the Future	Stephen Everhart Robert Duval-Hernandez	April 2001	M. Kam-Cheong 39618